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Jim Justice, Governor Austin Caperton, Cabinet Secretary www.dep.wv.gov

west virginia department of environmental protection

### G35-C GENERAL PERMIT ENGINEERING EVALUATION

PREVENTION AND CONTROL OF AIR POLLUTION IN REGARD TO THE CONSTRUCTION, MODIFICATION, RELOCATION, ADMINISTRATIVE UPDATE AND OPERATION OF NATURAL GAS COMPRESSOR AND/OR DEHYDRATION FACILITIES

NATURAL GAS COMPRESSOR AND/OR DEHYDRATION FACILITIES					
APPLICATION NO.: G35-0	C008B	FACILITY ID:	035-00047		
CONSTRUCTION MODIFICATION RELOCATION			OMINISTRATIVE UPDATE DMINISTRATIVE UPDATE		
В	ACKGROUND	INFORMATION			
Name of Applicant (as registered w EXCO Resources (PA), LLC	ith the WV Secr	retary of State's Off	ice):		
Federal Employer ID No. (FEIN): 0	3-54-03500047				
Applicant's Mailing Address: 260 I	Executive Drive,	Suite 100			
City: Cranberry Township	State: PA		ZIP Code: 16006		
Facility Name: Green Hills Compre	ssor Station				
Operating Site Physical Address: Ravenswood If none available, list road, city or town and zip of facility.					
City: Ravenswood	County: Jackson				
Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: 38.91695 Longitude: -81.69417					
SIC Code: 1311 NAICS Code: 211111		Date Application Received: September 29, 2016			
Fee Amount: \$4,000.00		Date Fee Received: September 30, 2016			
Applicant Ad Date: October 4, 2016		Newspaper: Jackson Newspapers			
Date Application Complete: Octobe	r 29, 2016	Due Date of Final Action: April 28, 2017			
Engineer Assigned: William T. Rothwell II, P.E.					
Description of Permitting Action: T facility with the only changes bei Engine (670 bhp) from the existing The only compressor engine at the (633 bhp).	ng the removal permit. This c	of a single Catery compressor engine w	pillar G3508 LE Compressor vas never installed at the site.		

#### PROCESS DESCRIPTION

The following process description was taken from Registration Application G35-C008B:

Natural Gas is produced from surrounding gas wells and routed to the EXCO Resources (PA) LLC, Green Hills Compressor Station. The pipeline gas suction line feeds into a separator that removes the produced liquids from the natural gas and stores the liquid in one (1) of two (2) 8,519 gallon condensate tanks. From the phase separators, the natural gas is then compressed to a higher pressure and discharged downstream by using a Caterpillar 3508TALE natural gas fueled internal combustion engine with a design capacity of 630 bhp. The natural gas stream then flows through a triethylene (TEG) glycol dehydration unit, where any fluids still entrained within the gas are removed prior to the gas entering the downstream sales pipeline. On-site lubricating oil is stored in a 500 gallon storage tank and the waste oil/liquid is stored in a 4,033 gallon storage tank. Condensate is removed from the site on an as needed basis via tank truck.

This modification is for the removal of the single Caterpillar G3508 LE Compressor Engine (670 bhp) from the existing permit. This compressor engine was never installed at the site.

#### SITE INSPECTION

A site inspection by the writer was deemed to be not necessary because the station is an existing, operating stationary source whose location is well known to the DAQ.

Last Site Inspection Date: April 25, 2012

Site Inspection Conducted By: James P. Robertson Results of Site Inspection: Source in Compliance. Did Applicant meet Siting Requirements? Yes

If applicable, was siting criteria waiver submitted? No

Directions to Facility: From 1-77 South, take Exit 146 to Route 56 East. Follow Route 56 East for approximately 2 miles. Turn left on a gravel road, veer to the left. Follow lease road 0.4 miles to the site.

### ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

The following table indicates which methodology was used in the emissions determination:

Emission Unit ID#	Process Equipment	Calculation Methodology (e.g. ProMax, GlyCalc, mfg. data, AP-42, etc.)
CE-1	Caterpillar G3508TALE / 630 hp	For NOx and CO: factors provided by Eng. Mfg.; Other criteria pollutants and all other HAPs are calculated using U.S. EPA's AP-42 for NG-Fired Engines; Cal. Assume heat content of 1,050 Btu/scf for Natural Gas.
TD-	Process liquids/ Condensate Tanks	EPA
201&202	#1& #2	
LR-1	Tanker Truck Loading	EPA
RBV-1	Hanover Glycol Dehydration Unit Reboiler	GRI-GLYCalc
RSV-1	Exterran Glycol Dehydration Unit Still Vent	GRI-GLYCalc

The total facility PTE for the facility (including fugitive emissions) is shown in the following table:

Pollutant	Facility Wide PTE (tons/year)	PTE Change for Modification (tons/year)
Nitrogen Oxides	12.35	-11.685
Carbon Monoxide	9.88	-19.189
Volatile Organic Compounds	39.52	-4.364
Particulate Matter	0.24	
Particulate Matter-10/2.5		
Sulfur Dioxide	0.01	-0.003
Formaldehyde	1.24	-2.592
Total HAPs	7.72	-2.588
Carbon Dioxide Equivalent	4,572.14	44.54

Maximum detailed controlled point source emissions were calculated by the applicant and checked for accuracy by the writer and are summarized in the table on the next page.

APPLICANT: EXCO RESOURCES (PA), LLC FACILITY NAME: GREEN HILLS Compressor G35-C008B	ANT:	EXCO	RESOL	JRCES	(PA), LI	C FA	CILIT	Y NA	ME: G	REENI	HILLS	Compre	ssor G3:	S-C008B
Emission	Z	NOx	)	CO	>	VOC	SO <sub>2</sub>	)2	PN	PM <sub>10</sub>	PN	PM2.5	GHG	GHG (CO <sub>2</sub> e)
Point ID#	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
CE-1	2.78	2.78 12.17	2.22	9.74	0.39	1.70	0.01	0.01	00.0	00.0	0.00	0.00	645.27	2826.28
TD- 201&202					0.92	4.03							3.55	15.56
LR-1				a construction of the cons	0.32	0.01								
RBV-1	0.04	0.18	0.03	0.15									58.55	256.44
RSV-1					7.69	33.66				-	77777		333.90	1462.47
TOTAL	2.82	2.82 12.35	2.26	9.88	9.34	39.52	0.01 0.01 0.00	0.01	0.00	0.00	0.00	0.00	1043.87	4572.14

8	i					Ī				
G35-C008B	Total HAPs	tpy	1 27	ì	0.11	000	0.00	0.01	6.34	7.72
G35	Total	lb/hr	0.29		0.03	0.03	0.0	0.01	1.45	1.79
	ane	tpy	0.03		0.09	A CONTRACTOR OF THE PERSON OF			0.84	96.0
	Hexane	lb/hr	0.01		0.02				0.19	0.22
ıc	nes	tpy	A STATE OF THE STA				The second secon		2.13	2.13
Compress	Xylenes	lb/hr	The state of the s						0.49	0.49
EN HILLS	Ethylbenzene	tpy								
TE: GRE		lb/hr	AND THE REAL PROPERTY AND THE PROPERTY A			SOCIOLO MANAGEMENT AND	A STATE OF THE PERSON OF THE P			
ITY NAN	Toluene	tpy	CONTROL OF THE PARTY OF THE PAR				The state of the s		2.32	2.32
FACIL	Toh	lb/hr	Announce of Agreement agreement from the common more and						0.53	0.53
A), LLC	Benzene	tpy	0.01			The same of the sa			1.05	1.07
URCES (I	Ben	lb/hr	0.01				7,1718.48.48.48.48.48.48.48.48.48.48.48.48.48		0.24	0.204
APPLICANT: EXCORESOURCES (PA), LLC FACILITY NAME: GREEN HILLS Compressor	Formaldehyde	tpy	1.24							1.24
ANT: E	Formal	lb/hr	0.28							0.28
APPLIC	Emission	Point ID#	CE-1	T.	201&202	LR-1		RBV-1	RSV-1	TOTAL

#### REGULATORY APPLICABILITY

#### 45CSR2 (Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers)

The purpose of 45CSR2 (Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers) is to establish emission limitations for smoke and particulate matter which are discharged from fuel burning units.

45CSR2 states that any fuel burning unit that has a heat input under ten (10) MMBTU/hr is exempt from Sections 4 (weight emission standard), 5 (control of fugitive particulate matter), 6 (registration), 8 (testing, monitoring, recordkeeping, reporting) and 9 (startups, shutdowns, malfunctions). However, failure to attain acceptable air quality in parts of some urban areas may require the mandatory control of these sources at a later date. If the individual heat input of all of the proposed fuel burning units are below 10 MMBTU/hr, these units are exempt from the aforementioned sections of 45CSR2. However, the registrant would be subject to the opacity requirements in 45CSR2, which is 10% opacity based on a six minute block average. Fuel burning units greater than 10 MMBTU/hr are ineligible for registration under General Permit G35-C.

Emission Unit ID#	Emission Unit Description	Maximum Design Heat Input (MDHI) (MMBTU/hr)
No Indirec	t Heat Exchanger	

#### 45CSR6 (To Prevent and Control Air Pollution from the Combustion of Refuse)

45CSR6 prohibits open burning, establishes emission limitations for particulate matter, and establishes opacity requirements. Sources subject to 45CSR6 include completion combustion devices, enclosed combustion devices, and flares.

The facility-wide requirements of the general permit include the open burning limitations §§45-6-3.1 and 3.2.

All completion combustion devices, enclosed combustion devices, and flares are subject to the particulate matter weight emission standard set forth in §45-6-4.1; the opacity requirements in §\$45-6-4-3 and 4-4; the visible emission standard in §45-6-4.5; the odor standard in §45-6-4.6; and, the testing standard in §\$45-6-7.1 and 7.2.

Enclosed combustion control devices and flares that are used to comply with emission standards of NSPS, Subpart OOOO are subject to design, operational, performance, recordkeeping and reporting requirements of the NSPS regulation that meet or exceed the requirements of 45CSR6.

Emission Unit ID#	Maximum Design Heat Input (MDHI) (MMBTU/hr)	Subject to Weight Emission Standard?	Control Efficiency Claimed by Registrant	Provide Justification how 45CSR6 is met.
No enclosed	d combustion contro	l devices and fla	res.	

#### 45CSR10 (To Prevent and Control Air Pollution from the Emission of Sulfur Oxides)

45CSR10 establishes emission limitations for SO<sub>2</sub> emissions which are discharged from stacks of fuel burning units. A "fuel burning unit" means and includes any furnace, boiler apparatus, device, mechanism, stack or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer. Sources that meet the definition of "Fuel Burning Units" per 45CSR10-2.8 include GPUs, inline heaters, heater treaters, and glycol dehydration unit reboilers.

Fuel burning units less than 10 MMBtu/hr are exempt. The sulfur dioxide emission standard set forth in 45CSR10 is generally less stringent than the potential emissions from a fuel burning unit for natural gas. The SO<sub>2</sub> emissions from a fuel burning unit will be listed in the G35-C permit registration at the discretion of the permit engineer on a case-by-case basis. Issues such as non-attainment designation, fuel use, and amount of sulfur dioxide emissions will be factors used in this determination. Fuel burning units greater than 10 MMBTU/hr are ineligible for registration under General Permit G35-C

Fuel burning units burning natural gas are exempt from Section 8 (Monitoring, Recording and Reporting) as well as interpretive rule 10A. The G35-C eligibility requirements exclude from eligibility any fuel burning unit that does not use natural gas as the fuel; therefore, there are no permit conditions for 45CSR10.

Emission Unit ID#	Emission Unit Description	Maximum Design Heat Input (MDHI) (MMBTU/hr)
No Fuel Bu	rning Units	

45CSR13 (Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation)

45CSR13 applies to this source due to the fact that the applicant is defined as a "stationary source" under 45CSR13 Section 2.24.b. Stationary source means, for the purpose of this rule, any building, structure, facility, installation, or emission unit or combination thereof, excluding any emission unit which meets or falls below the criteria delineated in Table 45-13B which: (a) is subject to any substantive requirement of an emission control rule promulgated by the Secretary; (b) discharges or has the potential to discharge more than six (6) pounds per hour and ten (10) tons per year, or has the potential to discharge more than 144 pounds per calendar day, of any regulated air pollutant; (c) discharges or has the potential to discharge more than two (2) pounds per hour or five (5) tons per year of hazardous air pollutants considered on an aggregated basis; (d) discharges or has the potential to discharge any air pollutant(s) listed in Table 45-13A in the amounts shown in Table 45-13A or greater; or, (e) an owner or operator voluntarily chooses to be subject to a construction or modification permit pursuant to this rule, even though not otherwise required to do so. 45CSR13 has an original effective date of June 1, 1974.

The applicant meets the definition of a stationary source because (check all that apply):

$\boxtimes$	Subject to a substantive requirement of an emission control rule promulgated by the Secretary.
	Discharges or has the potential to discharge more than six (6) pounds per hour and ten (10) tons per year, or
	has the potential to discharge more than 144 pounds per calendar day, of any regulated air pollutant.
	Discharges or has the potential to discharge more than two (2) pounds per hour or five (5) tons per year of
	hazardous air pollutants considered on an aggregated basis.
	Discharges or has the potential to discharge any air pollutant(s) listed in Table 45-13A in the amounts shown
	in Table 45-13A or greater.
	Voluntarily chooses to be subject to a construction or modification permit pursuant to this rule, even though
	not otherwise required to do so.

General Permit G35-C Registration satisfies the construction, modification, relocation and operating permit requirements of 45CSR13. General Permit G35-C sets forth reasonable conditions that enable eligible registrants to establish enforceable permit limits.

Section 5 of 45CSR13 provides the permit application and reporting requirements for construction of and modifications to stationary sources. No person shall cause, suffer, allow or permit the construction, modification, relocation and operation of any stationary source to be commenced without notifying the Secretary of such intent and obtaining a permit to construct, modify, relocate and operate the stationary source as required in the rule or any other applicable rule promulgated by the Secretary.

If applicable, the applicant meets the following (check all that apply):
Relocation Modification Class I Administrative Update (45CSR13 Section 4.2.a) Class II Administrative Update (45CSR13 Section 4.2.b)
45CSR16 (Standards of Performance for New Stationary Sources Pursuant to 40 CFR Part 60)
45CSR16 applies to all registrants that are subject to any of the NSPS requirements described in more detail in the Federal Regulations section. Applicable requirements of NSPS, Subparts IIII, JJJJ and OOOO are included in General Permit G35-C.
The applicant is subject to:  40CFR60 Subpart IIII  40CFR60 Subpart JJJJ  40CFR60 Subpart OOOO
45CSR22 (Air Quality Management Fee Program)
45CSR22 is the program to collect fees for certificates to operate and for permits to construct or modify sources of air pollution. 45CSR22 applies to all registrants. The general permit fee of \$500 is defined in 45CSR13. In addition to the application fee, all applicants subject to NSPS requirements or NESHAP requirements shall pay additional fees of \$1,000 and \$2,500, respectively.
Registrants are also required to obtain and have in effect a valid certificate to operate in accordance with 45CSR22 §4.1. The fee group for General Permit G35-C is Group 8D (natural gas compressor stations greater than 1,000 HP) with an annual operating fee of \$500 or 9M (all other sources) with an annual operating fee of \$200.
The applicant is in the following fee group:  8D (Natural Gas Compressor Stations Greater than 1,000 HP)  9M (All Other Sources)
40CFR60 Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal

Subpart IIII sets forth non-methane hydrocarbon (NMHC), hydrocarbon (HC), nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM) emission limits, fuel requirements, installation requirements, and monitoring requirements based on the year of installation of the subject internal combustion engine. The provisions for stationary compression ignition (CI) internal combustion engines for owners or operators of this Subpart have been included in General Permit G35-C, Section

Combustion Engines)

Emission Unit ID#	Engine Description (Make, Model)	Engine Size (HP)	Date of Manufacture	Provide Justification how 40CFR60 Subpart IIII is met.
No CI/Diese	el internal combustion	engines.		

### 40CFR60 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines)

Subpart JJJJ sets forth nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compound (VOC) emission limits, fuel requirements, installation requirements, and monitoring requirements based on the year of installation of the subject internal combustion engine. The provisions for stationary spark ignition (SI) internal combustion engines for owners or operators of this Subpart have been included in General Permit G35-C, Section 12.

Subpart JJJJ affects owners and operators of stationary spark ignition internal combustion engines (SI ICE) that commence construction, reconstruction or modification after June 12, 2006. Subpart JJJJ affects owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE.

The engine (CE-1) at the Green Hills Compressor Station is a 4-stroke, lean burn spark ignition RICE (rated at >130 hp) manufactured before July 1, 2008. The engine (CE-1) is not certified by the engine manufacturer (Caterpillar), however, manufacturers' data states the engine will meet the standard.

After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233. [40CFR§60.4236(a)]

EXCO Resources (PA), LLC must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, EXCO Resources (PA), LLC must conduct an initial performance test within 1 year of engine startup to demonstrate compliance. [40CFR§60.4243(a)]

Emission Unit ID#	Engine Description (Make, Model)	Engine Size (HP)	Date of Manufacture	Provide Justification how 40CFR60 Subpart JJJJ is met.
CE-1	Caterpillar G3508TALE	630	2007	<ul><li>✓ Met Emission Standard</li><li>☐ Certified Engine</li></ul>

### 40CFR60, Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution)

EPA published its New Source Performance Standards (NSPS) and air toxics rules for the oil and gas sector on August 16, 2012. EPA published final amendments to the Subpart on September 23, 2013.

40CFR60 Subpart OOOO establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO<sub>2</sub>) emissions from affected facilities that commence construction, modification or reconstruction after August 23, 2011. The affected sources which commence construction, modification or reconstruction after August 23, 2011 are subject to the applicable provisions of this Subpart as described below:

Centrifugal compressor affected facilities are included in General Permit G35-C, Section 10.0. Are there any applicable centrifugal compressor affected facilities not located at the well site? $\square$ Yes $X\square$ No If Yes, list.
Engine Description (Make, Model)
No Centrifugal Compressor Affected Facilities.
Each centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals that is located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment. A centrifugal compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this Subpart.
Reciprocating compressor affected facilities are included in General Permit G35-C, Section 11.0.  Are there any applicable reciprocating compressor affected facilities not located at the well site?  X   No
If Yes, list.
Engine Description (Make, Model)
CE-1 / Caterpillar / G3508TALE / 630 hp
Each reciprocating compressor affected facility, which is a single reciprocating compressor located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment. A reciprocating compressor located at a well site, or an adjacent well site and servicing more than one well site, is not an affected facility under this subpart.
The reciprocating compressor at the facility is subject to the requirement of NSPS OOOO, 40 CFR §60.5385, which requires owners and operators of an affected reciprocating compressor to change the rod packing prior to each operating 26,000 hours or prior to 36 months of since start up or the last packing replacement. EXCO Resources (PA), LLC will continue to comply with the requirement of this rule.
Pneumatic controllers affected facilities are included in General Permit G35-C, Section 9.0.
Are there any applicable pneumatic controller affected facilities? ☐ Yes X☐ No
For the natural gas production segment (between the wellhead and the point of custody transfer to the natural gas transmission and storage segment and not including natural gas processing plants), each pneumatic controller affected facility, which is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 scfh.
Requirements for storage vessel affected facilities are included in General Permit G35-C, Section 6.0. Determination of storage vessel affected facility status is included in Section 5.0 of General Permit G35-C. Are there any applicable storage vessel affected facilities? $\square$ Yes $X\square$ No
If No, list any emission reduction devices and control efficiencies used to avoid 40CFR60 Subpart OOOO. No reduction devices for storage vessels at the facility. The storage vessels at the facility have

If Yes, list.

VOC emissions less than 6 tpy and, therefore are not subject to Subpart OOOO.

Emission	Storage Vessel	SV Size	Provide Justification how 40CFR60
Unit ID#	Description	(gal)	Subpart OOOO is met.
The Sto			OC emissions are less than 6 tpy, and Subpart OOOO.

Each storage vessel affected facility, which is a single storage vessel located in the oil and natural gas production segment, natural gas processing segment or natural gas transmission and storage segment, and has the potential for VOC emissions equal to or greater than 6 tpy as determined according to this section by October 15, 2013 for Group 1 storage vessels and by April 15, 2014, or 30 days after startup (whichever is later) for Group 2 storage vessels. A storage vessel affected facility that subsequently has its potential for VOC emissions decrease to less than 6 tpy shall remain an affected facility under this subpart.

Subpart OOOO applies to affected facilities than commenced construction, reconstruction, or modification after August 23, 2011. This NSPS was published in the Federal Register on August 16, 2012, and has been subsequently amended. The list of potentially affected facilities includes:

- Gas wellheads
- Centrifugal compressors located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment
- Reciprocating compressors located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment
- Continuous bleed natural gas-driven pneumatic controllers with a blead rate of >6 scfh located tebteen the wellhead and the point of custody transfer to the natural gs transmission and storage segment (excluding natural gas processing plants)
- Continuous bleed natural gas-driven pneumatic controllers located at natural gas processing plants
- Storage vessels in the production, processing, or transmission and storage segments
- Sweetening units located onshore that process natural gas produced from eith onshore or offshore wells

The Green Hills Compressor Station is not a gas wellhead, nor is it a natural gas processing plant. Therefore, the only potentially applicable requirements for the equipment at the station are those for storage vessels, reciprocating compressors where construction commenced after August 23, 2011.

The are no produced water storage vessels for the Servia Compressor Station that commenced construction after the applicability date, and are potentially subject to the requirements of Subpart OOOO. Subpart OOOO applies to storage vessels with VOC emissions equal to or greater than 6 tpy. The storage vessels at the facility have VOC emissions less than 6 tpy and, therefore, are not subject to Subpart OOOO.

# 40CFR63 Subpart HH (National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities)

This Subpart applies to owners and operators of each tri-ethylene glycol (TEG) dehydration unit that are located at oil and natural gas production facilities. Only areas source requirements are included in General Permit G35-C, as defined in §63.761.

For area source applicability, the affected source includes each tri-ethylene glycol (TEG) dehydration unit located at a facility that meets the criteria specified in §63.760(a).

Glycol dehydration unit(s) are included in General Permit G35-C, Section 14.0.
Are there any TEG dehydration unit(s) at this facility?   Yes X No
Are the TEG dehydration unit(s) located within an Urbanized Area (UA) or Urban Cluster (UC)? $\Box$ Yes $X\Box$ No
Are the glycol dehydration unit(s) exempt from 40CFR63 Section 764(d)?   Yes   No

If Yes, answer the following questions:

The actual annual average flowrate of natural gas to the glycol dehydration unit(s) is less than 85 thousand standard cubic meters per day, as determined by the procedures specified in $63.772(b)(1)$ of this Subpart. $\Box$ Yes $\Box$ No
The actual average emissions of benzene from the glycol dehydration unit process vent(s) to the atmosphere are less than 0.90 megagram per year (1 ton per year), as determined by the procedures specified in $\S63.772(b)(2)$ of this Subpart. $\square$ Yes $\square$ No

# 40CFR63 Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines)

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This Subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations. This section reflects EPA's final amendments to 40 CFR part 63, Subpart ZZZZ that were issued on January 15, 2013 and published in the Federal Register on January 30, 2013.

WVDEP DAQ has delegation of the area source air toxics provisions of this Subpart requiring Generally Achievable Control Technology (GACT). The provisions of this Subpart have been included in this general permit under Section 12.0.

40 CFR §63.6590(c) states that a new or reconstructed RICE located at an area HAP source must meet the requirements of NESHAP Subpart ZZZZ by meeting the requirements of NSPS Subpart JJJJ. No further requirements apply for such engines under NESHAP Subpart ZZZZ. The Servia Compressor Station is a minor (area) source of hazardous air pollutants and the affected compressor engine (CE-1) is considered a new stationary RICE. Therefore, the requirements contained in §63.6590 (c) are applicable. Enervest Operating, LLC will be in compliance with applicable requirements of 40 CFR 63 Subpart ZZZZ by meeting the applicable requirements of 40 CFR 60 Subpart JJJJ.

Emission Unit ID#	Engine Description (Make, Model)	Engine Size (HP)	Date of Manufacture	New or Existing under 40CFR63 Subpart ZZZZ?	Provide Justification how 40CFR63 Subpart ZZZZ is met.
CE-1	Caterpillar G3508TALE	630	2007	New	Performance Testing

Are there any engines that fall in the window of b	eing new under	40CFR60 Sub	part ZZZZ but manufac	tured before
the applicability date in 40CFR60 Subpart JJJJ?	X □ Yes	□ No		

If so, list the engines: CE-1

SOURCE AGGREGATION DETERMINATION
"Building, structure, facility, or installation" is defined as all the pollutant emitting activities which belong to the same industrial grouping, are located on one or more contiguous and adjacent properties, and are under the control of the same person.
Are there surrounding wells or compressor stations under "common control" of the applicant? $\square$ Yes $X\square$ No
Are the properties in question located on "contiguous or adjacent" properties?  □ Yes X □ No
Are there surrounding facilities that share the same two (2) digit SIC code? $X \square Yes \square No$
Final Source Aggregation Decision.  ☐ Source not aggregated with any other source. ☐ Source aggregated with another source. List Company/Facility Name: EXCO Resources (PA), LLC
RECOMMENDATION TO DIRECTOR
The information provided in the permit application, including all supplemental information received, indicates the applicant meets all the requirements of applicable regulations and the applicant has shown they meet the eligibility requirements of General Permit G35-C. Therefore, impact on the surrounding area should be minimized and it is recommended that the facility should be granted registration under General Permit G35-C.
Permit Engineer Signature: William T. Rothwell II, P.E. Date: April 28, 2017